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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,358	12/09/2003	Satofumi Kinei	900-484	1789

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EXAMINER

MOORE, KARLA A

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 09/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/730,358

Applicant(s)

KINEI, SATOFUMI

Examiner

Karla Moore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1203.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claim 8 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention (Group II), there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 31 May 2005.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,543,576 to Heiber et al. in view of U.S. Patent No. 4,975,252 to Nishizawa et al.

4. Heiber et al. disclose a semiconductor device production apparatus substantially as claimed in Figures 1-5 and comprising: a rotary table section (7, abstract) including a rotary table for supporting a wafer (1) thereon; a chamber (22) for housing the rotary table section; a heater (abstract and column 3, rows 67-68) for heating the wafer; a temperature sensing device (14 and 15) for sensing the temperature of the wafer; temperature measuring section (25) for converting the sensed temperature into a first signal to output the first signal; and a signal generating section (26) for converting the output first signal into a second signal detectable from outside the chamber (via transmitter 27); wherein the temperature sensing device, the temperature measuring section and the signal generating section are attached to the rotary table section (each is arranged in measuring system, 18, attached to pallet 7).

5. However, Heiber et al. fail to explicitly teach the heater provided in the chamber.

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6. Nishizawa et al. teach that it is known in the art to provide a substrate heater structures inside or outside a processing chamber during a deposition process (column 6, rows 40-46 and column 8, rows 15-22).

7. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided the substrate heater either inside or outside the deposition chamber in Heiber et al. as is known in the art as taught by Nishizawa et al.

8. With respect to claim 2, Heiber et al. fail to teach the temperature sensing device includes a thermocouple.

9. Nishizawa et al. disclose the use of thermocouple for measuring the temperature of a substrate during processing (column 4, rows 29-32).

10. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a thermocouple as the temperature sensing device in Heiber et al. in order to measure the temperature of the substrate as taught by Nishizawa et al.

11. With respect to claim 4, as noted above, the signal generating section comprises a wireless transmitter (27).

12. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heiber et al. and Nishizawa et al. as applied to claims 1-2 and 4, and further in view of U.S. Patent Pub. No. 2003/0168171 A1 to Tanaka et al.

13. Heiber et al. and Nishizawa et al. disclose the invention substantially as claimed and as described above.

14. However, Heiber et al. and Nishizawa et al. fail to teach the signal generating section comprises a detachable storage device.

15. Tanaka et al. teach the use of a detachable storage device in processing data associated with semiconductor manufacturing processes for the purpose of advantageously reducing the load on a data collecting device and for easily controlling collected data (paragraphs 44-48).

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16. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided the signal generating section comprising a detachable storage device in Hieber et al. and Nishizawa et al. in order to advantageously reduce the load on the data collecting device and easily control collected data as taught by Tanaka et al.

17. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hieber et al. and Nishizawa et al. as applied to claims 1-2 and 4, and further in view of U.S. Patent No. 4,683,143 to Riley.

18. Heiber et al. and Nishizawa et al. disclose the invention substantially as claimed and as described above.

19. However, Heiber et al. and Nishizawa et al. fail to teach the signal generating section comprises a display device.

20. Riley teach the use of a display device for displaying processing conditions for the purpose of periodically updating a user regarding the status of a process while controlling a process (column row row 57, through column 2, row 5).

21. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a display device in Heiber et al. and Nishizawa et al. in order to periodically update a user regarding the status of a process while controlling the process as taught by Riley.

22. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hieber et al., Nishizawa et al. and Tanaka et al. as applied to claim 3, and further in view of U.S. Patent No. 4,683,143 to Riley.

23. Heiber et al., Nishizawa et al. and Tanaka disclose the invention substantially as claimed and as described above.

24. However, while Heiber et al. do disclose the use of a computer/storage data reader (30) for accepting measured data from the apparatus, wherein the computer is located outside the chamber; Heiber et al., Nishizawa et al. and Tanaka et al. fail to explicitly teach the apparatus further comprises a heater controlling section, also provided outside the chamber.

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25. Riley discloses the use of a heater controller located outside a processing chamber for the purpose of controlling internal heaters used to regulate temperature of a processing apparatus (column 3, rows 47-56).

26. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a heater controller in Heiber et al., Nishizawa et al. and Tanaka et al. in order to control internal heaters used to regulate temperatures of the processing apparatus as taught by Riley.

27. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heiber et al. and Nishizawa et al. as applied to claims 1-2 and 4, and further in view of U.S. Patent No. 4,683,143 to Riley.

28. Heiber et al. and Nishizawa et al. disclose the invention substantially as claimed and as described above.

29. However, while Heiber et al. do disclose a receiver (29) for receiving the wireless signal from the transmitter, wherein the receiver is located outside the chamber; Heiber et al. and Nishizawa et al. fail to explicitly teach the apparatus further comprises a heater controlling section, also provided outside the chamber.

30. Riley discloses the use of a heater controller located outside a processing chamber for the purpose of controlling internal heaters used to regulate temperature of a processing apparatus (column 3, rows 47-56).

31. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a heater controller in Heiber et al. and Nishizawa et al. in order to control internal heaters used to regulate temperatures of the processing apparatus as taught by Riley.

Conclusion

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USP 4975252; 5147498; 5549756; 5969639; 6328802; 20020148307; 6827630; 6895831; 6907364 and 20040007326 each disclose temperature control mechanisms for a processing chamber.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 571.272.1440. The examiner can normally be reached on Monday-Friday, 9:00 am-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571.272.1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karla Moore
Patent Examiner
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22 August 2005